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August 18, 1955
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Washington, D. C.

Attn:

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Dear

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Confirming our telephone conversation on 18 August 1955 the frequency ranges of the Viking transmitter and the kilowatt amplifier are as listed:

Transmitter	Amplifier
1.675 - 2.15 mc.	3.5 - 30 mc.
3.175 - 4.48 mc.	
6.375 - 8.20 mc.	
12.48 -17.32 mc.	
19.25 -24.12 mc.	
23.32 -32.90 mc.	

The amplifier is continuously tunable over the indicated range. This range cannot be extended in either direction without entailing appreciable modifications.

The transmitter is continuously tunable in each of the six bands listed but there are gaps between bands as may be noted. The bandwidth requirement for transmission of the 100 microsecond pulse is about 100 kc. However, the receiver has very definite limitations and for that reason we are confining our attention to the forward edge of the pulse, giving little concern to the overall pulse shape.

Time delay measurements for one complete transmission, that is from the initiating transmitter through a receiver, the automatic keying circuit, the second transmitter, back through a receiver at the initial transmitting location and not including any propagation time, is 236 microseconds which is accurate within ± 3 microseconds. However, we are not yet in a position to state the degree of stability of the circuit. This matter is being investigated. It is expected that our present studies will answer such questions as to the effect of primary voltage change, change of tubes, and the effect of

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replacing such components as resistors, capacitors, etc. These are factors which must be known, of course. The results of a few tests in which we varied the primary line voltage in excess of plus and minus 10% were most satisfactory as they indicated no appreciable change in the time delay. We hope that we will find a corresponding lack of sensitivity with a change in tubes.

In a recent telephone conversation with [redacted] a tentative date for a visit here was selected for the week beginning with Labor Day. It is suggested that perhaps Friday, 9 September 1955, would be acceptable. If this date is agreeable I would suggest it be a firm date.

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With kind regards -

Sincerely yours,

[redacted]

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Project Engineer

NS/mas

cc: 3 (orig & 2)

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